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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,943	03/02/2004	William R. Wilson	8654/2222	2176

29933 7590 04/20/2006

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EXAMINER	
DELACROIX MUIRHE, CYBILLE	

ART UNIT	PAPER NUMBER
1614	

DATE MAILED: 04/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/790,943	WILSON ET AL.	
	Examiner	Art Unit	
	Cybille Delacroix-Muirheid	1614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 January 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 8/5/05 and 01/27/06
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Detailed Action

1. Claims 1-23 and (24-27) are rejected under 35 U.S.C. 102(b) as being anticipated by Siemann et al., (abstract already of record, PTO-892) and Siemann et al., Int. J. Cancer: 99, 1-6 (2002). (cited by applicant).

2. Claims 1-6 and (24-27) are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for treating a limited number of cancers such as mammary carcinoma or pancreatic carcinoma, does not reasonably provide enablement for treating cancers in general. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

New claims 24-27 are rejected along with claims 1-23 under 35 USC 102(b) and are rejected along with claims 1-6 under 35 USC 112, first paragraph for reasons provided in the office action mailed July 29, 2005. However, additional comments concerning these claims are made below.

Response to Amendment(s)

The following is responsive to applicant's amendment received Jan. 27, 2006.

No claims are cancelled. New claims 24-27 are added. Claims 1-27 are currently pending.

Please note: the information disclosure statement filed May 10, 2005 fails to comply with 37 CFR 1.97(c) because it lacks the fee set forth in 37 CFR 1.17(p). Office records do not show

that the fee has been paid. It has been placed in the application file but the information referred to therein has not been considered.

Applicant's arguments traversing the previous claim rejections under 35 USC 102(b) and 35 USC 112, first paragraph, set forth on pages 3-7 of the office action mailed July 29, 2005, have been considered but are not found to be persuasive.

Said rejections are maintained essentially for the reasons given previously in the office action mailed July 29, 2005 with the following additional comment.

Claim Rejection(s)—35 USC 102:

Applicant argues there is no evidence of record to support the contention that the teachings of the Siemann et al. (2002) paper describe the same experiments taught in the Siemann et al. abstract. Applicants respectfully point out that it is not proper to combine the teachings of the two Siemann et al. references, because there is no indication that they are even describing the same experiments, and therefore, there is no evidence to support the Office Action's assertion as to what is meant by a "rodent tumor model" as recited by the Siemann et al. abstract. Moreover, even if it were assumed (which it is not) that the experiments taught in the Siemann et al. abstract relating to the use of DMXAA alone used the same tumor model as taught in the Siemann et al. paper, there is no teaching in the Siemann et al. abstract that the combination of DMXAA and cisplatin or cyclophosphamide was tested using the same tumor model. Thus, the Siemann et al. abstract does not teach a method for treating cancer in a mammal by administering the claimed drug combinations in vivo. Applicants therefore request that the rejection be reconsidered and withdrawn.

Said arguments have been considered but are not found to be persuasive.

While a 102 rejection normally requires a single reference, the court has held that another reference may be used to explain (supplement) the teachings of the primary reference. Please see In re Baxter Travenol Labs, 21 USPQ2d 1281 (CAFC 1991). The examiner respectfully maintains the 102 rejection is proper. Whether or not the Siemann et al. (2002) paper describes the identical tumor model taught in the Siemann et al. abstract is, respectfully, not the issue. The Siemann et al. (2002) paper effectively supplements the Siemann et al. abstract by explaining that the rodent tumor model taught in the Siemann et al. abstract is a mammal and is therefore an *in vivo* model not an *in vitro* model. This is pertinent because the claims require in vivo treatment.

Concerning new claims 24-27, they are rejected over the prior art, which discloses the combination of DMXAA and cisplatin or cyclophosphamide.

It is for these reasons that the rejection stands.

Claim Rejection(s)—35 USC 112, first paragraph:

The claims are drawn to a method of treating a solid cancerous tumor using a combination of DMXAA and an anticancer compound. One of skill in the art, given the disclosure of the instant specification and the level of knowledge and skill in the art, would be able to select a particular solid cancerous tumor of interest for treatment, select a particular anticancer agent from the list recited in the claims and known in the art to be useful for treatment of the particular selected tumor, use the anti-cancer compound in combination with DMXAA, and determine whether the solid cancerous tumor is treated by the chosen combination.

The specification teaches specific solid cancerous tumors that can be treated according to the claimed invention. See page 22, line 25 to page 23, line 2. In addition, the Examples provide

specific teachings of the ability of the methods of the invention to treat mammary carcinoma using DMXAA in combination with each of vincristine (vinca alkaloid), carboplatin (platinum compound), cisplatin (platinum compound), cyclophosphamide, etoposide (topoisomerase II inhibitor), and doxorubicin (anthracyclinel; and pancreatic carcinoma using DMXAA in combination with gemcitabine (antimetabolite). The specification also teaches how one of skill in the art, using no more than routine experimentation would test whether a specific combination of an anticancer compound and DMXAA is able to treat a particular solid tumor type. Page 23 teaches specific cell lines for use in an animal model that may be used to test the efficacy of particular drug combinations in treating over 20 different solid cancerous tumors.

The Office Action asserts that the specification is not enabling because the "prior art recognizes that no one compound or combination of compounds is capable of treating" all cancers. The claims do not require that a single combination of compounds be able to treat all cancers. The claims relate to the treatment of a solid cancerous tumor by administering a combination of DMXAA and a known anti-cancer agent. The claims do not require that the selected anti-cancer agent in combination with DMXAA be able to treat all cancers. In addition, Applicants respectively submit that the assertion in the Office Action that "the prior art recognizes activity of the claimed compounds against a limited number of cancer types" is misleading.

As with this or any invention, it is the very fact that the prior art does not teach what is being claimed that makes the invention patentable. Moreover, the fact that a particular prior art reference reports on a particular combination of drugs recited in the claims relative to a particular cancer type (although, as noted above, Applicants do not concede that Siemann et al.

teaches administration of the claimed combinations to a mammal to treat cancer) does not mean that the claimed compounds are "limited" to the treatment of just those types of cancers. Taken together, the teachings of the specification and knowledge of those of ordinary skill in the art enable one of skill in the art to practice the full scope of the claimed invention without having to resort to undue experimentation.

Said arguments have been considered but are not found to be persuasive.

The present specification is evaluated by the Examiner as directed by the Court in *In re Marzocchi et al.* , 169 USPQ 367 (CCPA 1971):

"Specification disclosure which contains teaching of manner and process of making and using the invention in terms corresponding to the scope to those used in describing and defining subject matter sought to be patented must be taken as in compliance with enabling requirement of first paragraph of 35 U.S.C. 112 *unless there is reason to doubt the objective truth of statements contain therein which must be relied on for enabling support*; assuming that sufficient reason for such doubt exists, a rejection for failure to teach how to make and/or use will be proper on that basis, such a rejection can be overcome by suitable proofs indicating that teaching contained in specification is truly enabling." (emphasis added).

Here, the objective truth that all solid cancers, known to one of ordinary skill in the art can be treated by administration of the claimed combination of compounds is doubted. The state of the art with regard to treating cancer broadly, even solid cancers, is underdeveloped and highly unpredictable. In particular, there is no known anticancer agent or combination of agents effective against all cancer types, even solid cancerous tumors. The Goodman & Gilman reference (cited by Examiner) clearly shows that for the various known cancer types, including solid cancers, there is not one specific chemotherapeutic agent or combination of agents that is effective for each and every type of cancer. Therefore, the examiner is compelled to doubt that all solid cancers can be treated by the claimed combination.

According to MPEP 2164.08, the Federal Circuit has repeatedly held that "the specification must teach those skilled in the art how to make and use the full scope of the claimed invention without undue experimentation'." In re Wright, 999 F.2d 1557, 1561, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993). All that is necessary is that one skilled in the art be able to practice the claimed invention, given the level of knowledge and skill in the art. Further the scope of enablement must only bear a "reasonable correlation" to the scope of the claims. See, e.g., In re Fisher, 427 F.2d 833, 839, 166 USPQ 18, 24 (CCPA 1970).

As concerns the breadth of a claim relevant to enablement, the only relevant concern should be whether the scope of enablement provided to one skilled in the art by the disclosure is commensurate with the scope of protection sought by the claims. > AK Steel Corp. v. Sollac, 344 F.3d 1234, 1244, 68 USPQ2d 1280, 1287 (Fed. Cir. 2003);< In re Moore, 439 F.2d 1232, 1236, 169 USPQ 236, 239 (CCPA 1971). See also Plant Genetic Sys., N.V. v. DeKalb Genetics Corp., 315 F.3d 1335, 1339, 65 USPQ2d 1452, 1455 (Fed. Cir. 2003).

In this case, the Examiner respectfully submits that the scope of enablement in the disclosure does not bear a "reasonable correlation" to the scope of the claims. The claims have been amended to recite treatment of solid cancerous tumors. Even as amended, the claims remain very broad and encompass more than the 20 different solid cancers disclosed in the specification. It is acknowledged that Applicant is not required to enable each and every single embodiment encompassed by the claims, but must enable a sufficient number to be reasonably representative of that which is claimed. However, applicant has not provided any evidence or persuasive argument in the present disclosure or in the response to the rejection made under 35 USC 112, first paragraph, as to how the examples and data shown in the specification are reasonably

representative of the treatment of solid cancers ***in general***. In the absence of any sound evidence or scientific reasoning as to how the skilled artisan would extrapolate any results from animal models involving pancreatic and mammary carcinoma in the present disclosure as being reasonably suggestive of treating solid cancers (in general), the present disclosure is not determined to be enabling for the treatment of all types of cancers.

Additionally, in light of the state of the art, which conspicuously lacks recognition that all forms of cancer, including solid cancers, are treatable by the administration of one drug or one combination of drugs, and in view of the unpredictability of effectively treating cancer, it is highly unlikely, and the Office would require experimental evidence to support the contention, that the claimed combination of compound(s) could actually treat all solid cancers by simply administering, by any method, an amount of the claimed active agents.

Given what is presently claimed, what is presently disclosed, and given what is supported by adequate description in the specification, one of ordinary skill in the art would have no alternative recourse ***but*** undue experimentation in order to determine how the present invention could be used to treat all forms of solid cancerous tumors.

It is for these reasons that the rejection stands.

Conclusion

Claims 1-27 are rejected.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Cybille Delacroix-Muirheid** whose telephone number is **571-272-0572**. The examiner can normally be reached on Mon-Thurs. from 8:30 to 6:00 as well as every other Friday from 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Christopher Low**, can be reached on **571-272-0951**. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CDM
April 17, 2006

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